CLAIMS:

1. An electronic circuit for supplying a high-pressure discharge arc lamp (12), which circuit comprises a half bridge comprising at least one controllable switching element (T_1, T_2) in each of its bridge branches for providing an alternating current, and at least two coils (L_{ign}, Tr_{filt}), four capacitors (C_{ign}, C_{DC2}, C_{DC1}, C_{filt}, C_{igna}, C_{filta}), and two connection terminals for a high-pressure discharge arc lamp (12), which half bridge (T_1, T_2) is connected between a connection terminal of the circuit for providing an operating potential (U_+) and a connection terminal of the circuit for providing a reference potential (10), while a first connection terminal of the first coil (L_{ign}) is connected to the first connection terminal for a high-pressure discharge arc lamp (12) and to the connection terminal for the reference potential (10) at least via the first capacitor (C_{ign}, C_{igna}), and the second connection terminal for a high-pressure discharge arc lamp (12) is connected to the connection terminal for the operating potential (U_+) at least via the second capacitor (C_{DC2}) as well as to the connection terminal for the reference potential (10) at least via the third capacitor (C_{DC1}), characterized in that
the second coil (Tr_{filt}) has at least three taps, of which a first, outer tap is connected to the output (11) of the half bridge (T_1, T_2), of which a second, central tap is connected to the second connection terminal of the first coil (L_{ign}), and of which a third, outer tap is connected to the connection terminal for the reference potential (10) at least via the fourth capacitor (C_{filt}, C_{filta}).

2. An electronic circuit as claimed in claim 1, characterized in that the first capacitor and the fourth capacitor (C_{ign}, C_{filt}, C_{igna}, C_{filta}) are each directly connected to the connection terminal for the reference potential.

3. An electronic circuit as claimed in claim 1, characterized in that the first capacitor and the fourth capacitor (C_{ign}, C_{filt}) are each connected to the connection terminal for the reference potential via the third capacitor (C_{DC1}) and are each connected to the connection terminal for the operating potential (U_+) via the second capacitor (C_{DC2}).

4. An electronic circuit as claimed in any one of the preceding claims, characterized in that the first connection terminal of the first coil (L_{ign}) is additionally connected to the connection terminal for the operating potential (U_+) via a fifth capacitor (C_{ignb}), and/or in that the third, outer tap of the second coil (Tr_{filt}) is additionally connected to the connection terminal for the operating potential (U_+) via a sixth capacitor (C_{filtb}).

5. An electronic circuit as claimed in any one of the preceding claims, characterized in that the output of the half bridge (T_1, T_2) is additionally connected to the connection terminal for the reference potential via at least one further capacitor (C_{dvdta}).

6. An electronic circuit as claimed in any one of the preceding claims, characterized in that the output of the half bridge (T_1, T_2) is additionally connected to the connection terminal for the operating potential (U_+) via at least one further capacitor (C_{dvdtb}).

7. An electronic circuit as claimed in any one of the preceding claims, characterized in that the arrangement consisting of the second coil (Tr_{filt}) and the fourth capacitor (C_{filt}) forms a blocking filter for the central tap of the second coil (Tr_{filt}) at a switching frequency with which the controllable switching elements (T_1, T_2) of the half bridge are preferably switched in normal operation.

8. An electronic circuit as claimed in any one of the preceding claims, characterized in that the resonance frequency of a resonant circuit comprising the first coil (L_{ign}) and the first capacitor (C_{ign}) is higher than a frequency at which the arrangement of the second coil (Tr_{filt}) and the fourth capacitor (C_{filt}) forms a blocking filter for the central tap of the second coil (Tr_{filt}).

9. An electronic circuit as claimed in claim 8, characterized in that the resonance frequency of a resonant circuit comprising the first coil (L_{ign}) and the first capacitor (C_{ign}) is an odd multiple of the frequency at which the arrangement of the second coil (Tr_{filt}) and the fourth capacitor (C_{filt}) forms a blocking filter for the central tap of the second coil (Tr_{filt}).

10. An electronic circuit as claimed in any one of the preceding claims, characterized by a control circuit (14) for controlling the switching elements (T_1, T_2) of the half bridge, and by a current sensor arranged between the output (11) of the half bridge and

the second coil (Tr_{filt}) for measuring the current (i_1) through the second coil (Tr_{filt}), which sensor passes on the measured data to the control circuit (14), which control circuit (14) controls the switching elements (T_1, T_2) in dependence on the measurement results of the current sensor (13).

11. An electronic circuit as claimed in claim 10, characterized in that the control circuit (14) comprises:

- a first frequency generator (211) for providing complementary pulses for an ignition operation of the electronic circuit,
- a second frequency generator (221) for providing trigger pulses for a normal operation of the electronic circuit,
- a waveform generator (224) for providing a current reference signal and a lamp current direction in accordance with a desired lamp current gradient,
- a comparator (223) for comparing the measurement results of the current sensor (13) with the current reference signal from the waveform generator (224), such that the output of the comparator (223) is inverted in the case of a desired positive lamp current, and
- a flipflop (222) with two complementary outputs (Q, /Q) which is set by the trigger pulses of the second frequency generator (221), which is reset by a high-level output signal of the comparator (223), possibly after an inversion, and whose complementary output signals are inverted in the case of a desired positive lamp current, and
- a process controller (202) for switching over between an ignition operation and a normal operation, which controller for the purpose of normal operation supplies one of the – possibly inverted – complementary output signals of the flipflop (222) to one of the switching elements (T_1, T_2) of the half bridge so as to control the latter, such that the switching element (T_2) at the side of the reference potential is switched on and the switching element (T_1) at the side of the operating voltage is switched off the moment the second frequency generator (221) generates a trigger pulse if a positive lamp current is desired, and the switching element (T_2) at the reference potential side is switched off and the switching element (T_1) at the operating voltage side is switched on when the measured value of the current sensor (13) undershoots the reference value of the waveform generator (224), whereas for a desired negative lamp current the switching element (T_1) at the operating voltage side is switched on and the switching element (T_2) at the reference potential side is switched off the moment the

second frequency generator (221) generates a trigger pulse, and the switching element (T_1) at the operating voltage side is switched off and the switching element (T_2) at the reference potential side is switched on when the measured value of the current sensor (13) overshoots the reference value of the waveform generator (224).

12. An electronic circuit as claimed in claim 11, characterized in that the first frequency generator (211) makes available the complementary pulses at a frequency which corresponds to the resonance frequency of the serial tuned circuit comprising the first coil (L_{ign}) and the first capacitor (C_{ign}), and in that the second frequency generator (221) for the purpose of a normal operation of the electronic circuit makes available the trigger pulses with a frequency which corresponds to the frequency at which the arrangement of the second coil (Tr_{filt}) and the fourth capacitor (C_{filt}) forms a blocking filter for the central tap of the second coil (Tr_{filt}).

13. An electronic circuit as claimed in claim 11 or 12, characterized in that the process controller (202) feeds the complementary pulses provided by the first frequency generator (211) to the switching elements (T_1, T_2) of the half bridge to control the latter during an ignition phase.

14. An electronic circuit as claimed in claim 13, characterized in that the process controller (202) after the end of the ignition phase switches over the frequency of the trigger pulses provided by the second frequency generator (221) for a short time to a frequency below the frequency at which the arrangement of the second coil (Tr_{filt}) and the fourth capacitor (C_{filt}) forms a blocking filter for the central tap of the second coil (Tr_{filt}).

15. A method of operating a high-pressure lamp by means of an electronic circuit as claimed in any one of the preceding claims, characterized in that the switching elements (T_1, T_2) of the half bridge are controlled such that a substantially zero-voltage switching takes place each time.

16. A method of operating a high-pressure lamp by means of an electronic circuit as claimed in any one of the claims 1 to 14, characterized in that, for the purpose of igniting a high-pressure discharge lamp (12) connected between the connection terminals for a high-pressure discharge lamp, the switching elements (T_1, T_2) of the half bridge are switched

during an ignition phase substantially exactly at the resonance frequency or an odd multiple of the resonance frequency of the resonant circuit consisting of the first coil (L_{ign}) and the fourth capacitor (C_{ign}).

17. A lighting system comprising an electronic circuit as claimed in any one of the claims 1 to 14 and a high-pressure gas discharge lamp (12) which is connected between the two connection terminals of the electronic circuit designed for a high-pressure discharge arc lamp.

18. A device for the display of still or moving images utilizing an electronic circuit as claimed in any one of the claims 1 to 14.